

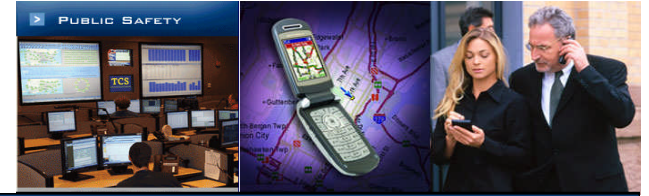


Text to 9-1-1

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Agenda



- Introduction
- The Challenge of text to 9-1-1
- The TCS Solution
- Pros and Cons
- Funding
- Conclusion

TCS Fast Facts



Established in 1987

- Annapolis HQ, Seattle, Tampa, London
- Data Centers in WA, AZ, MD
- NOCs in Seattle and Annapolis
- NASDAQ: TSYS



Strategic Offers

- Wireless Location & Messaging Solutions
- Satellite Services and Deployable Systems
- Homeland Security
- Professional Services



CERTIFIED
ISO 9001:2000



Industry Relations

- Founding Member: SMS Forum, PAM Forum, IN Forum
- Member: 3GPP, CTIA, ETSI, GSM, NENA, APCO, OMA, TIA, ESIF, NRIC VII, IETF



TCS E9-1-1 Solutions



- Meets wireless E9-1-1 Phase I and Phase II FCC requirements
- Provides standards-based VoIP i2 E9-1-1 service (Owns the original i2 patent)
- Displays caller location to police, fire and emergency personnel (life-saving information)
- Supports 24/7 monitoring and operations
- Operates 2 fully redundant data centers
- Serves over 100 million subscribers
- Processes over 125,000 calls/day
- Has completed over 100,000,000 E9-1-1 calls to date
- Operates the only TL9000 certified NOC in the 911 industry



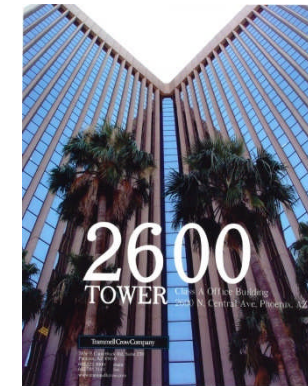
TCS Facilities/NOC/Data Center



Seattle Network Operations Center



Seattle Data Center

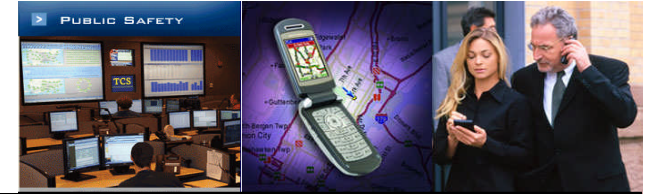


**Backup NOC &
Data Center
Phoenix, AZ**

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Challenge of Text to 9-1-1

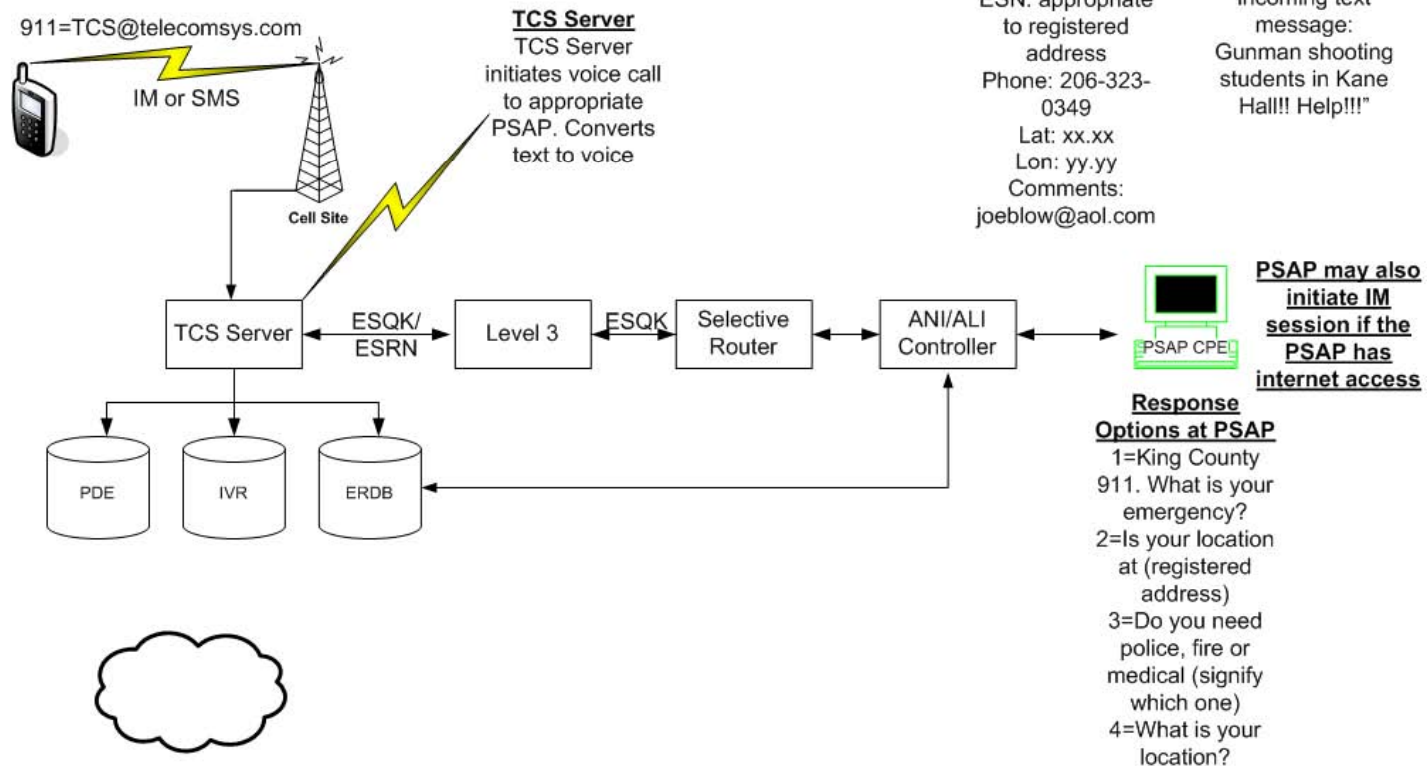


- PSAPs not equipped to accept text
- No financial incentive to provide text
- Next Generation solution will require
 - Infrastructure upgrades
 - PSAP upgrades

The TCS Solution



TCS 9-1-1 Text Relay

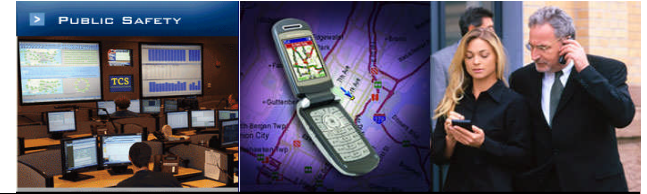


TCS Solution Keys



- Automatic call routing to correct PSAP
- Automatic location info in ALI data
- Automatic IM/SMS address in ALI data
- Optional DTMF canned responses

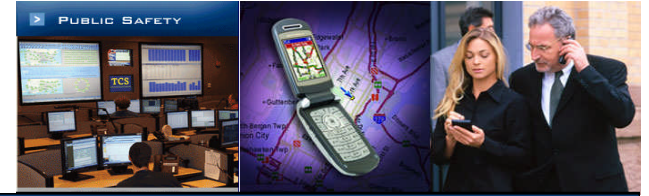
Pros and Cons



- Advantages

- Fast access to correct PSAP
- No TTY headache or equipment required
- Works with SMS or IM (IM is more secure and is preferred by users)
- No upgrades to most PSAPs
- Works with existing handsets
- Location and call-back info in ALI data
- Less expensive (?)
- No registration required (location data less reliable)
- Usable by anyone; not only for the deaf (VA Tech)
- Carrier agnostic; no carrier upgrades/provisioning

Pros and Cons



- Disadvantages
 - Inflexible
 - Some delay in sending/receiving text messages (same problem exists with existing TRS)

Non-Emergency Applications



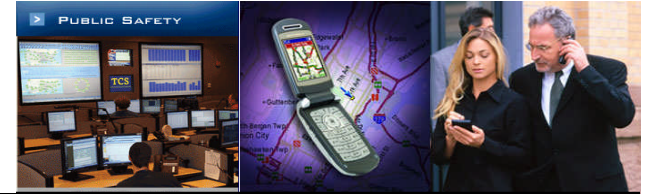
- User-created DTMF response menus

Funding



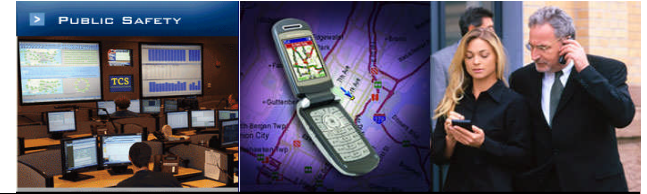
- TRS funding currently administered through FCC and NECA
- Strict rules for who qualifies for funding
 - Must have human Comm Assistant (CA)
 - Must handle 3-way calls
 - Must handle toll calls
 - Must deal with voice mail
- Payment to TRS based on “per minute”
 - TCS solution could be “per message” or “per month” or something other than “per minute”
- Not a viable market for self-supporting “enhanced services”

Conclusion



- People should have access to 9-1-1 via text
- Funding guidelines should be adjusted to accommodate automated relay services that provide communications alternatives that may not comply with traditional TRS, but which are popular with the deaf community.

Thank you



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